510(k) Summary
for the ART2 Spinal Fixation System

DEC 2 8 2011

In accordance with 21 CFR 807.92 of the Federal Code of Regulations
the following 510(k) summary is submitted for the ART2 Spinal Fixation System

Date Prepared: November 30, 2010

1. **Owner:**
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2. **Trade name:** ART2 Spinal Fixation System
Common Name: orthosis, pedicle screw system
Classification Name: orthosis, spondylolisthesis spinal fixation
orthosis, spinal pedicle fixation
21 CFR Sec. 888.3070
MNH
MNI
Class II

3. **Predicate or legally marketed devices which are substantially equivalent:**
ART Posterior Spinal System - K033150 (AMT)
ISOBAR - K990118/K013444 (Scient'x)

4. **Description of the device:**
The ART2 Spinal Fixation System has been developed with the objective of providing the surgeon with an adaptable pedicle screw system in order to carry out posterior pedicle screw fixation of the spine simply, quickly and effectively. It is a modification of the ART Pedicle Screw system (K033150).

The system consists of a variety of color coded top loading pedicle screws. The pedicle screws are available in various lengths and diameters. The screw is connected to the rod via a rod connector. Two sizes of connectors are available, short and long. The long is used in cases of spondylolisthesis where the short connector would not be able to engage the rod. The rods are available in multiple lengths.

Materials:
The components are manufactured from titanium alloy (Ti 6Al 4V ELI) per ASTM F136.

Function:
The ART2 Spinal Fixation System is a pedicle screw system intended to provide immobilization and stabilization of spinal segments until fusion takes place.

Changes in this submission:
- Modification to pedicle screw design
- Addition of Ø8.0mm screws
- Addition of cannulated screws and reposition screws
- Addition of Ø5.5mm straight and curved rods

5. **Intended Use:**
The ART2 Spinal Fixation System is a pedicle screw system intended to provide immobilization and stabilization of spinal segments in skeletally mature patients as an adjunct to fusion in the treatment of the following acute and chronic instabilities or deformities of the thoracic, lumbar, and sacral spine:

degenerative spondylolisthesis with objective evidence of neurological impairment, fracture, dislocation, scoliosis, kyphosis, spinal tumor, and failed previous fusion (pseudarthrosis).

As a pedicle screw system ART2 Spinal Fixation System is indicated for the treatment of severe spondylolisthesis (Grades 3 and 4) of the L5-S1 vertebra in skeletally mature patients receiving fusion by autogenous bone graft having implants attached to the lumbar and sacral spine (L3 to sacrum) with removal of the implants after the attainment of a solid fusion.

6. **Technological characteristics compared to the predicate device(s):**

ART2 Spinal Fixation System is substantially equivalent to the ART Posterior Spinal System and ISOBAR Spinal System in terms of technological characteristics, intended use, design, materials used, and performance. The information provided within this premarket notification supports substantial equivalence to the predicate device(s).

7. **Summary of Nonclincal Tests:**

The following tests were conducted:

- Static and dynamic compression per ASTM F1717. The acceptance criteria was/were met.
- Static torsion per ASTM F1717. The acceptance criteria was/were met.
- Static Axial Slippage per ASTM F1798. The acceptance criteria was/were met.
- Static Torsional Slippage per ASTM F1798. The acceptance criteria was/were met.

The results of this testing indicate that the ART2 Spinal Fixation System is equivalent to predicate device(s).

8. **Clinical Test Summary:**

No clinical studies were performed

9. **Conclusions Nonclinical and Clinical:**

Conclusions drawn from the nonclinical and clinical tests demonstrate that the ART2 Spinal Fixation System is as safe, as effective, and performs as well as or better than the predicate device(s).

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
10903 New Hampshire Avenue
Document Control Room –WO66-G609
Silver Spring, MD 20993-0002

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Advanced Medical Technologies
% The OrthoMedix Group, Inc.
Mr. J.D. Webb
1001 Oakwood Boulevard
Round Rock, Texas 78681

Re: K103573
Trade/Device Name: ART2 Spinal Fixation System
Regulation Number: 21 CFR 888.3070
Regulation Name: Pedicle screw spinal system
Regulatory Class: Class II
Product Code: MNH, MNI
Dated: December 15, 2011
Received: December 20, 2011

Dear Mr. Webb:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you; however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act

or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm.

Sincerely yours,

Mark N. Melkerson
Director
Division of Surgical, Orthopedic
and Restorative Devices
Office of Device Evaluation
Center for Devices and
Radiological Health

Enclosure

Indications for Use

510(k) Number (if known): K103573

Device Name: ART2 Spinal Fixation System

Indications for Use:

The ART2 Spinal Fixation System is a pedicle screw system intended to provide immobilization and stabilization of spinal segments in skeletally mature patients as an adjunct to fusion in the treatment of the following acute and chronic instabilities or deformities of the thoracic, lumbar, and sacral spine: degenerative spondylolisthesis with objective evidence of neurological impairment, fracture, dislocation, scoliosis, kyphosis, spinal tumor, and failed previous fusion (pseudarthrosis).

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Prescription Use X (Part 21 CFR 801 Subpart D)	AND/OR	Over-The-Counter Use _____ (21 CFR 807 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE OF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

(Division Sign-Off)
Division of Surgical, Orthopedic,
and Restorative Devices

510(k) Number K103573